

Magnetoresistance Random Access Memory with Reduced
Switching Field Variation

Abstract of the Disclosure

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An array of multi-state, multi-layer magnetic memory devices (10) wherein each memory device comprises a nonmagnetic spacer region (22) and a free magnetic region (24) positioned adjacent to a surface of the nonmagnetic spacer region, the free magnetic region including a plurality of magnetic layers (36,34,38), wherein the magnetic layer (36) in the plurality of magnetic layers positioned adjacent to the surface of the nonmagnetic spacer region has a thickness substantially greater than a thickness of each of the magnetic layers (34,38) subsequently grown thereon wherein the thickness is chosen to improve the magnetic switching variation so that the magnetic switching field for each memory device in the array of memory devices is more uniform.

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